

Heat Mixes Experiment:

~~NAILS~~ → WASHERS

Follow the hand-out and collect data

Table is experiment group

- recorder
- equipment manager
- time keeper

~~BALANCE~~ → SCALE

→ SWITCH FOR
PART 2

If you have time, give some thought to the first and last questions in the packet.

<u>COLD WATER</u> 9	<u>COMBINED</u> 15	<u>HOT WASHERS</u> 61
<u>COLD WASHERS</u> 9	<u>COMBINED</u> 40	<u>HOT WATER</u> 54

Jan 4-7:20 AM

Welcome!!!

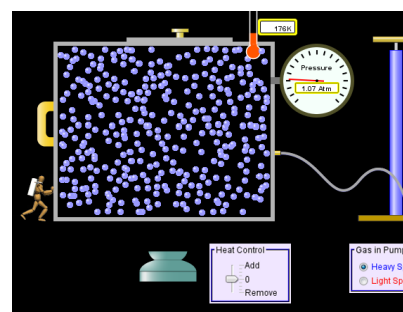
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SECA Physics
Thursday 16 January 2014

Centering

* Pick up:

- slip of paper (for later)
- white board, marker, eraser



Opening question:

When you look at the blue dot heat simulation, does it remind you of anything?

Sep 7-7:04 AM

Experiment #1: Cold water combined with hot washers
~3 oz (~100 g) of metal washers and same amount of water

COLD WATER	COMBINED	HOT WASHERS
12°C	17°C	37°C
10°C	11°C	36°C
15°C	17°C	35°C

Experiment #2: Hot water combined with cold washers
~3 oz (~100 g) of metal washers and same amount of water

HOT WATER	COMBINED	COLD WASHERS
40°C	35°C	13°C
37°C	30°C	12°C
37°C	32°C	10°C

Jan 4-7:20 AM

SPECIFIC HEAT CAPACITY: HIGHER # \Rightarrow HARDER TO CHANGE TEMPERATURE

Table 21.1	Specific Heat Capacities	
Material	(J/g°C)	
Water	4.186	
Aluminum	0.900	
Clay	1.4	
Copper	0.386	
Lead	0.128	
Olive Oil	1.97	
Silver	0.23	
Steel (iron)	0.448	

The "Mosh Pit" Analogy...

LEAD: 0.128
MOSHERS
BANG INTO EACH OTHER
FLYING AROUND
EASY TO CHANGE TEMP

ALUMINUM 0.900
HEADBANGERS
MOVING THEMSELVES
BANG INTO EACH OTHER
HARDER TO CHANGE TEMP

WATER 4.186
- SPINNING
- VIBRATING
SUPER HARD TO CHANGE TEMP.

21. CBAD

22. BCAD

Jan 10-7:29 AM

Conduction

Eureka 24

<http://www.youtube.com/watch?v=tpkyuqial8o>

<http://www.wisc-online.com/Objects/heattransfer/>

Jan 16-7:53 AM

CP: No Homework Tonight

Daily 3 Questions

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

Your can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1. Desert sand is very hot in the day and cold at night. What does this tell you about its specific heat?

Low

2. Which is going to change a pail of water's temperature more (everything else being the same):
a piece of aluminum or a piece of **silver**?

3. Which has a higher specific heat capacity: **metal** or water?

Jan 3-7:48 AM

1. SAND HEATS IN DAY,
COOLS OFF AT NIGHT.
WHAT DOES THAT MEAN ABOUT
ITS SPECIFIC HEAT?
Low

2. WHICH IS GONG TO
CHANGE WATER^{TEMP} MORE
ALUMINUM OR SILVER?

3. WHAT HAS THE LOWEST S.H.C.
IN THE TABLE? LEAD

Jan 16-8:40 AM